

Remarks

Reconsideration and withdrawal of the objections and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1, 3-5, 9, 11, 12, and 22-26 are now pending in the application, with Claims 1 and 12 being independent. Claims 2, 6-8, 10, and 13-21 have been cancelled without prejudice. Claims 1, 3-5, 9, 11, 12, and 22-24 have been amended herein. Claims 25 and 26 have been added herein.

Figure 4 has been labeled --Prior Art--, as requested by the Examiner. Favorable consideration is requested.

The Examiner requested that the specification be revised in order to comply with 35 U.S.C. § 112, first paragraph. The entire specification has been reviewed and amended where appropriate. Regarding Equation 1 on page 14, the symbols in question are well-known to those of ordinary skill in the art. For example, the symbol " \prod " is used in mathematics to represent a product notation. Favorable consideration is requested.

In paragraph [4], it was indicated that a certified copy of Applicant's priority application was filed in "parent Application No. 2001-035836." However, such is not a parent application, but rather the Japanese priority application itself.

Claims 1-24 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,974,165 (Giger). This rejection is respectfully traversed.

As is recited in independent Claim 1, the present invention relates to an image processing apparatus for processing a photographed image of an object. The apparatus includes an object extracting portion, an analyzing portion and a gradation conversion portion. The object extracting portion is configured to extract an object region which is a region of the object from the photographed image. The analyzing portion is configured to determine a region from which a statistics value is calculated on a basis of both a pixel which is on a contour on a side in the object region and shows a maximum value and a pixel which is on a contour on the other side in the object region and shows a maximum value. The gradation conversion portion is configured to execute a gradation conversion processing on the photographed image based on the statistics value.

As is recited in independent Claim 12, the present invention relates to an image processing method for processing a photographed image of an object. The method includes the steps of extracting an object region which is a region of the object from the photographed image, determining a region from which a statistics value is calculated on a basis of both a pixel which is on a contour on a side in the object region and shows a maximum value and a pixel which is on a contour on the other side in the object region and shows a maximum value, and executing a gradation conversion processing on the photographed image based on the statistics value.

With the above arrangement and method, a region extraction can be stably executed even in a case of an image in which it is difficult to extract the region, such as with a cervical spine region.

It is respectfully submitted that Giger does not disclose or suggest at least determining a region from which a statistics value calculated on a basis of both a pixel which is on a contour on a side in an object region and shows a maximum value and a pixel which is on a contour on the other side in the object region and shows a maximum value, as is recited in independent Claims 1 and 12.

Thus, Giger fails to disclose or suggest important features of the present invention recited in the independent claims.

Thus, independent Claims 1 and 12 are patentable over the citations of record. Reconsideration and withdrawal of the § 102 rejection are respectfully requested.

For the foregoing reasons, Applicant respectfully submits that the present invention is patentably defined by independent Claims 1 and 12. Dependent Claims 3-5, 9, 11 and 22-26 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicant submits that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark A. Williamson", written over a horizontal line.

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